Moderator:
Derry Allen, Counselor, Office of Environmental Policy Innovation

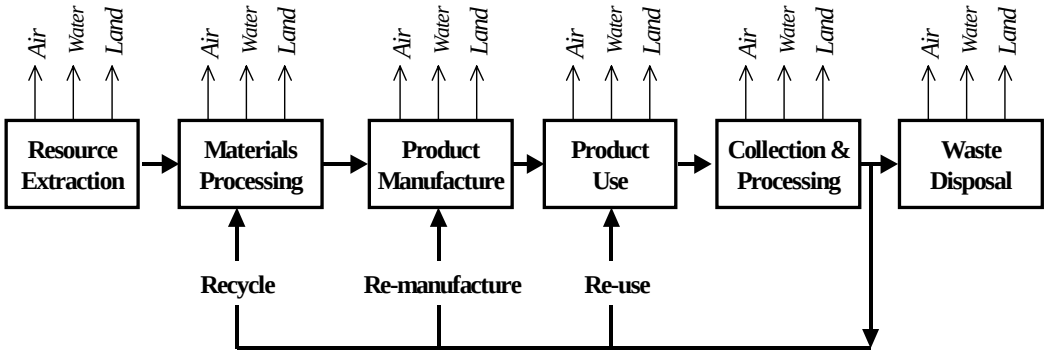
[I want the people in the hallway to know that we are going to do something unusual today – we are going to start this session early. We are going to do that partly because we know that one of the iron laws of running a conference is never get in the way of people and their airplanes. If those in the hallway want to come in, why don't we get going.]

I am Derry Allen from EPA's Office of Policy, Economics and Innovation and I am delighted to welcome you to this session that I know you have all been waiting for. I say that for two reasons. One, this is the last major session of this conference except of course for Jay Benforado's wrap up. The other reason is that this is the session in which we hope to look ahead a little bit at environmental innovations that we can think about for the future. The other sessions focused on what innovations are underway right now. Right now we're going to look beyond what has been discussed at most of this symposium.

I am going to take a couple of minutes to introduce the subject and introduce all three speakers. I will let each of them talk for approximately 15 minutes. Then we will have time for questions and answers. We have three very interesting speakers and initially it may not be clear to you how their topics are related to one another. I will show you one slide which should - I hope - explain this relationship to you.

Some of you may have seen this slide before. It shows a generalized diagram of the flow of materials. It begins with resource extraction, then goes through processing, product manufacturing and use, collection and then finally waste disposal. You can see from each one of those that there are emissions to air, water and land. Traditionally what EPA has done is look at each arrow and try to figure out how we can control that particular waste best. We have also looked at this process as being linear. What many people are trying to say now is let's look at this as a whole system and let's see where there are some opportunities to make the whole system work better. Maybe we can find some efficiencies that we have not found before.

The Flow of Materials



There are three major things that you ought to discuss when looking at a diagram such as this. First, you must put some information on this -- you must add some numbers on this to look at specific materials and the amounts that are flowing.

Our very first speaker is Eric Rodenburg from the United States Geological Survey who is in fact in charge of the organization that generates many of these key numbers, particularly the ones at the beginning of this diagram. Eric is going to talk about a project that has been underway at the World Resources Institute where he used to work and where he began this project. And he turned out to be such a good customer of the United States Geological Survey's information that they hired him. But Eric is going to look at this whole thing and say what are some of the flows and kinds of numbers we can put on them. What sort of overall picture does this begin to show us.

Our second speaker is Bob Pfahl, who is one of the key managers of research at Motorola. Motorola as a product manufacturer would find itself right here (points to third unit on diagram). Bob is going to tell you about some of the innovative things that his company is thinking about as they design and manufacture products. And they are not just looking at the three little arrows coming out of the product manufacture box. What he is going to talk about is how they pick materials that they are putting into the products, and how they are designing products so that later they can be reused (and flow back), and in fact can skip some of these boxes and the environmental impacts that are associated with them.

Our third speaker will be Elizabeth Cotsworth, the Director of the Office of Solid Waste at the United States Environmental Protection Agency in Washington DC. Liz is the Director of the office that is most prominently associated with the last box here, waste

disposal. But as you can see, land is one of the media to which waste are emitted throughout this cycle. What Liz is going to talk about is a vision for the future for the RCRA program which extends 20 years from now. It builds specifically off of this concept. It would use some of the information that Eric is going to talk about, and it would take advantage of some of the types of industrial thinking that Bob is going to talk about. As a vision for the future, it will begin to paint a picture of what EPA could look like a generation from now.

With that I would like to turn this over to our first speaker, Eric Rodenburg.